



# The Branches of Earth Science



#2

Name \_\_\_\_\_ Hour \_\_\_\_\_

1. What is an Earth Science **Event**?
2. List the four **Branches** of Earth Science and one **Event** for each Branch:
  - a.
  - b.
  - c.
  - d.
3. List two activities performed by or events studied by **geologists**:
  - a.
  - b.
5. List two activities performed by or events studied by **astronomers**:
  - a.
  - b.
6. List two activities performed by or events studied by **meteorologists**:
  - a.
  - b.
7. List two activities performed by or events studied by **oceanographers**.
  - a.
  - b.
8. **Attach** one newspaper or magazine article relating to a branch of Earth Science.
9. **Answer** the following questions about your article: *(Use separate sheet of paper)*
  - a. **Copy** the headline (or photo caption):
  - b. Identify the **branch** of Earth Science it covers:
  - c. What **activity** would the scientist have to be doing in order for this article to be written (or photograph taken)?
  - d. What Earth Science **event** is covered in the article?

**CHAPTER****1****STUDY GUIDE FOR CONTENT MASTERY**

# The Nature of Science

## SECTION 1.1 Earth Science

*In your textbook, read about the scope of Earth science.*

Use the terms below to identify of the major area of Earth science that studies each subject. Each term can be used more than once.

**astronomy****meteorology****geology****oceanography**

- \_\_\_\_\_ 1. Physical and chemical properties of the oceans
- \_\_\_\_\_ 2. Objects beyond Earth's atmosphere
- \_\_\_\_\_ 3. Materials that make up Earth
- \_\_\_\_\_ 4. Forces and processes that produce weather
- \_\_\_\_\_ 5. Earth's neighbors, distant stars, and other cosmic bodies
- \_\_\_\_\_ 6. Rocks, glacial movements, and clues to Earth's history
- \_\_\_\_\_ 7. Creatures that inhabit salty water
- \_\_\_\_\_ 8. Blanket of air that surrounds Earth

Circle the letter of the choice that best completes the statement or answers the question.

- 9. What subspecialty of Earth science studies patterns of weather over a long period of time?  
**a.** geochemistry      **b.** climatology      **c.** tectonics      **d.** paleontology
- 10. Hydrology is the study of which of the following?  
**a.** habitats of organisms  
**b.** effects of internal processes on Earth's surface  
**c.** water flow on and below Earth's surface  
**d.** how the moon and stars affect people's lives
- 11. What subspecialty of Earth science studies ancient environments?  
**a.** paleontology      **b.** ecology      **c.** tectonics      **d.** hydrology
- 12. Which of the following might an ecologist study?  
**a.** earthquakes and mountain building  
**b.** the remains of organisms that once lived on Earth  
**c.** the kinds of matter in the universe  
**d.** how organisms interact with each other and their environments
- 13. In what field do scientists study the processes that change Earth's composition?  
**a.** climatology      **b.** hydrology      **c.** geochemistry      **d.** paleontology

**SECTION 1.1** *Earth Science, continued*

*In your textbook, read about Earth's systems and Earth science in your everyday life.*

**For each statement below, write *true* or *false*.**

- \_\_\_\_\_ **14.** Earth's lithosphere is the rigid outer shell of the planet.
- \_\_\_\_\_ **15.** The water in Earth's oceans, seas, lakes, rivers, and glaciers makes up the atmosphere.
- \_\_\_\_\_ **16.** The blanket of gases that surround Earth is the atmosphere.
- \_\_\_\_\_ **17.** The asthenosphere is the partially molten layer of Earth's core.
- \_\_\_\_\_ **18.** The atmosphere contains about 78 percent oxygen.
- \_\_\_\_\_ **19.** About three-fourths of all freshwater on Earth is contained in glaciers.
- \_\_\_\_\_ **20.** The hemisphere includes all organisms on Earth as well as the environments in which they live.
- \_\_\_\_\_ **21.** The atmosphere, biosphere, hydrosphere, and lithosphere are interdependent systems.

**Answer the following questions.**

**22.** How does continental crust differ from oceanic crust?

\_\_\_\_\_

\_\_\_\_\_

**23.** Describe three ways the atmosphere helps support life on Earth.

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\_\_\_\_\_

\_\_\_\_\_

**24.** What is technology?

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\_\_\_\_\_

**25.** Name three products first developed for use in space that people now use in their everyday lives.

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\_\_\_\_\_

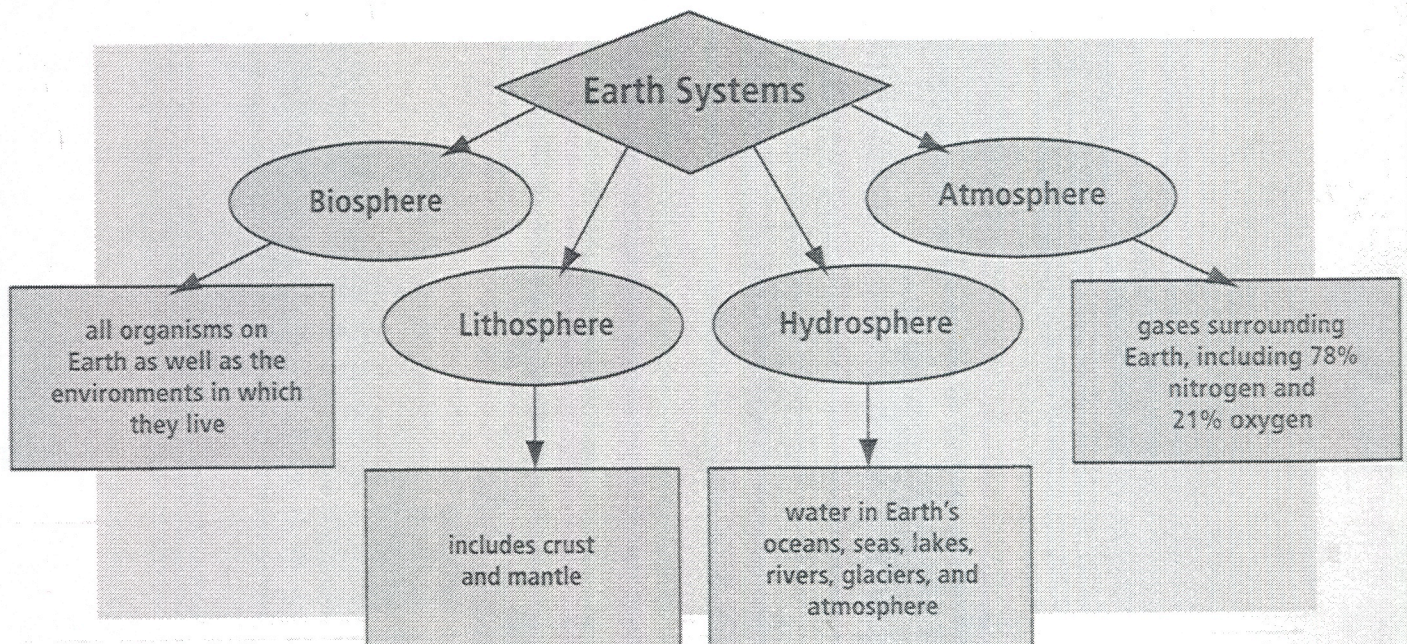
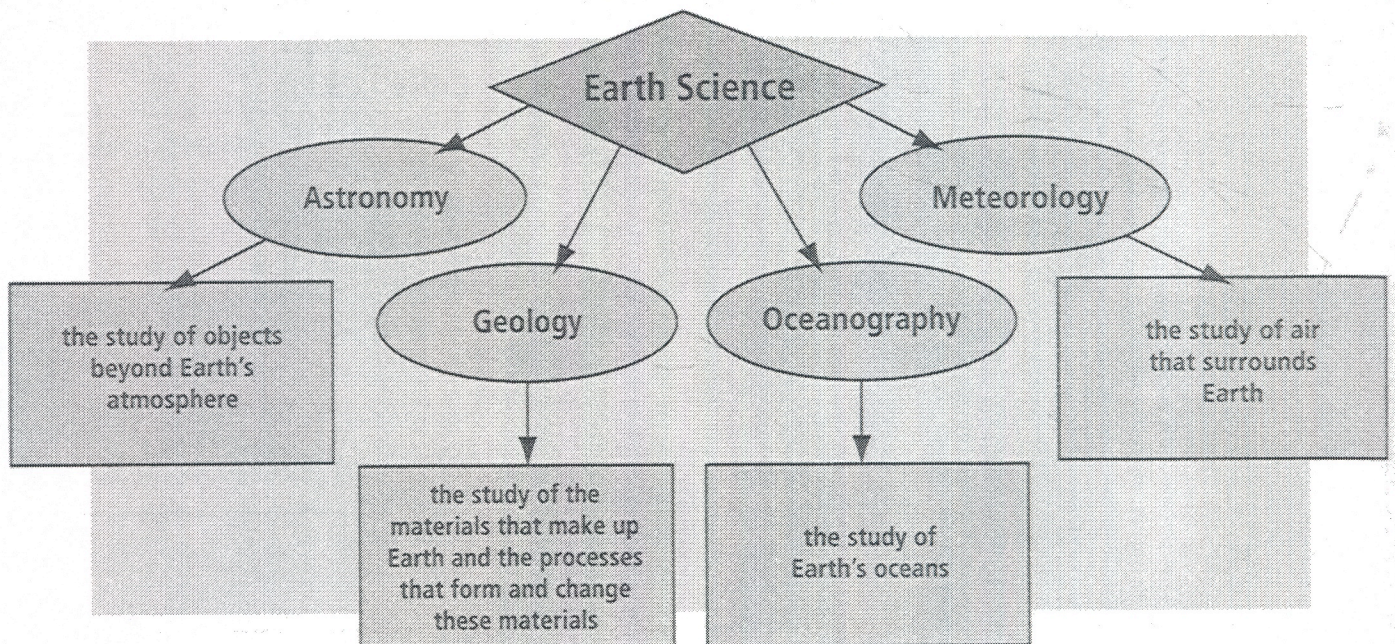
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How Are Earth's Spheres Interacting Table

Topic <i>what sphere caused event?</i>	Impact on Hydrosphere	Impact on Atmosphere	Impact on Lithosphere	Impact on Biosphere
A. Tropical Island, Palau Islands				
B. Forest fire, Montana, U.S.A				
C. Oil wells burning, Kuwait and the Persian Gulf				
D. Suez Canal, Egypt				
E. Wind farm, Norfolk County, England				
F. Mount Etna, a volcano on the island of Sicily, Italy				



# Earth Science and Earth Systems





*Use with Chapter 1  
Section 1.1*

# Earth Science and Earth Systems

1. What do astronomers study?

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2. Which area of Earth science deals with the blanket of air that surrounds Earth?

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3. List three activities of geologists.

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4. Which Earth scientists study the properties and inhabitants of saltwater bodies?

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5. What are the two parts of Earth's lithosphere?

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6. Contrast the lithosphere with the asthenosphere.

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7. What percentage of the hydrosphere exists as salt water? What percentage exists as freshwater?

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8. Which two gases make up 99 percent of the gases in the atmosphere? Which gas is more abundant?

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9. What are the components of the biosphere?

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## BRANCHES

Lithosphere

Geology

Oceanography

Biosphere

Astronomy

Atmosphere

Meteorology

Hydrosphere

## SPHERES

The study of Earth's interior and its surface

The study of the universe, stars, planets and moons

The study of Earth's oceans

The study of Earth's atmosphere, weather and storms.

Contains all the gases and air in Earth's system

Contains all of Earth's living things

Contains Earth's rigid crust and the plastic like part of the mantle

Contains water in Earth's oceans, rivers, lakes, seas, glaciers and atmosphere